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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kazuo YAMAGATA et al.
Serial No : Not Yet Assigned (National Stage of PCT/JP01/06000)
Filed : International Filing Date July 11, 2001
For : COATED CUTTING TOOL

PRELIMINARY AMENDMENT

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Prior to calculation of the filing fees and the examination of the above-identified patent application on the merits, the Examiner is respectfully requested to amend the claims as follows:

IN THE CLAIMS

Please amend the claims as follows (a marked-up copy of the claim amendments is provided as an attachment to this Amendment):

3. (Amended-Clean Text) A coated cutting tool according to Claim 1, wherein the hard coating layer comprises one or more kinds of substances selected from the group consisting of carbides, nitrides, carbonitrides, borides, and oxides of one or more kinds of metal elements selected from the periodic table IVa, Va, VIa groups, Al, and Si, and solid solutions thereof.

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5. (Amended-Clean Text) A coated cutting tool according to Claim 1, wherein the smooth face comprises an aluminum oxide layer.

6. (Amended-Clean Text) A coated cutting tool according to Claim 1, wherein the ranges of the smooth face are the blade-edge ridge, a range of at least 500 μ m from the rake face side boundary of the ridge toward the rake face side and a range of at least 200 μ m from the flank side boundary of the ridge toward the flank side.

7. (Amended-Clean Text) A coated cutting tool according to Claim 4, wherein the inner layer comprises titanium carbonitride with a film thickness of 2 to 20 μ m having a columnar crystal structure.

8. (Amended-Clean Text) A coated cutting tool according to Claim 1, wherein an innermost layer contacting with the substrate comprises a titanium nitride film of 0.2 to 3 μ m in thickness having a granular structure.

9. (Amended-Clean Text) A coated cutting tool according to Claim 5, wherein the aluminum oxide layer comprises alpha aluminum oxide with a film thickness of 0.5 to 15 μ m.

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10. (Amended-Clean Text) A coated cutting tool according to Claim 1, wherein the substrate comprises cermet.

REMARKS

By the above amendment, the claims have been amended to delete multiple dependency.

If there should be any questions, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
Kazuo YAMAGATA et al.


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MARKED-UP COPY OF AMENDED CLAIMS

3. (Amended) A coated cutting tool according to Claim 1 [or 2], wherein the hard coating layer comprises one or more kinds of substances selected from the group consisting of carbides, nitrides, carbonitrides, borides, and oxides of one or more kinds of metal elements selected from the periodic table IVa, Va, VIa groups, Al, and Si, and solid solutions thereof.

5. (Amended) A coated cutting tool according to Claim 1 [any of Claims 1 through 4], wherein the smooth face comprises an aluminum oxide layer.

6. (Amended) A coated cutting tool according to Claim 1 [any of Claims 1 through 5], wherein the ranges of the smooth face are the blade-edge ridge, a range of at least 500 μ m from the rake face side boundary of the ridge toward the rake face side and a range of at least 200 μ m from the flank side boundary of the ridge toward the flank side.

7. (Amended) A coated cutting tool according to Claim 4 [any of Claims 4 through 6], wherein the inner layer comprises titanium carbonitride with a film thickness of 2 to 20 μ m having a columnar crystal structure.

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8. (Amended) A coated cutting tool according to Claim 1 [any of Claims 1 through 7], wherein an innermost layer contacting with the substrate comprises a titanium nitride film of 0.2 to 3 μm in thickness having a granular structure.

9. (Amended) A coated cutting tool according to Claim 5 [any of Claims 5 through 8], wherein the aluminum oxide layer comprises alpha aluminum oxide with a film thickness of 0.5 to 15 μm .

10. (Amended) A coated cutting tool according to Claim 1 [any of Claims 1 through 9], wherein the substrate comprises cermet.